

Date: Wednesday, 18/06/2008 1:27:12 PM  
 User: Julie Lecocq

## Process Sheet

<b>Customer</b> :	CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> :	TUNNEL BOTTOM PANEL
<b>Job Number</b> :	39929		
<b>Estimate Number</b> :	13026		
<b>P.O. Number</b> :		<b>Part Number</b> :	D3649041
<b>This Issue</b> :	18/06/2008	<b>S.O. No.</b> :	
<b>Prsht Rev.</b> :	NC	<b>Drawing Number</b> :	D3649 REV.B
<b>First Issue</b> :	//	<b>Project Number</b> :	N/A
<b>Previous Run</b> :	36911	<b>Drawing Revision</b> :	B
	<b>Type</b> :	<b>Material</b> :	
	SMALL /MED FAB	<b>Due Date</b> :	07/07/2008
<b>Written By</b> :		<b>Qty:</b>	2 Um: Each
<b>Checked &amp; Approved By</b> :	JUL 08.6.18		
<b>Comment</b> :	Est Rev:A New Issue 07-09-26 EC verified by: DD Est Rev:B ECN 1113P 08-01-22 DD verified by: EC Est Rev:C Ecn1162 08-04-02 DD verified by:EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	M304S26GA	304/316 0.018 SHEET
-----	-----------	---------------------



**Comment:** Qty.: 6.3725 sf(s)/Unit Total : 12.7449 sf(s)  
 304/316 SS sheet 26 ga (0.018" thick)  
 Batch: 108415 HB 8-6-27

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



**Comment:** FLOW WATER JET  
 1-Cut as per Dwg D3649  
 Dwg Rev: B HB 8-6-27  
 Prog Rev: B

2-Deburr if necessary HB 8-6-27

3

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



HB 8-6-27



**Comment:** INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



**Comment:** SECOND CHECK

508607/01 (43)

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



**Comment:** NC BRAKE  
 Form as per Dwg D3649

1080774 (3)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng				

NOTE: Date & initial all entries

Date: Wednesday, 18/06/2008 1:27:12 PM  
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUNNEL BOTTOM PANEL

Job Number: 39929

Part Number: D3649041

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/07/15 (13)

7.0

MS210603K

Nut Plate



Comment: Qty.: 22.0000 Each(s)/Unit Total : 44.0000 Each(s)

Nut Plate

M108456

FF 08-07-24

(2)

8.0

MS210623K

Nut Plate



Comment: Qty.: 22.0000 Each(s)/Unit Total : 44.0000 Each(s)

Nut Plate

M108669

FF 08-07-24

(2)

9.0

MS20427M33

Rivet



Comment: Qty.: 88.0000 Each(s)/Unit Total : 176.0000 Each(s)

Rivet

M106993

FF 08-07-24

(2)

10.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Form dimple for MS20427M3 rivet per dwg D3649

\*\*\*\*\*ensure dimples are on the proper side\*\*\*\*\*

2-Assemble nutplates as per dwg D3649

FF 08-07-29

(2)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/07/25 (12)

12.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and stock

Location: \_\_\_\_\_

39926

FF 08-08-06

(2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng				

NOTE: Date & initial all entries

Date: Wednesday, 18/06/2008 1:27:12 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUNNEL BOTTOM PANEL

Job Number: 39929

Part Number: D3649041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*Handwritten signature/initials*

Job Completion



*Handwritten signature/initials*

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng				

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 39929
<b>Description:</b> Tunnel Bottom Panel		<b>Part Number:</b> D3649-1
<b>Inspection Dwg:</b> D3649 <b>Rev:</b> B		<b>Page 1 of 2</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article      ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.098	+0.004/-0.001	.100	*		✓	
Ø0.196	+0.005/-0.001	.200	*		✓	
Ø0.250	+0.005/-0.001	.252	*		✓	
0.400	+/-0.010	.400	*		✓	
0.385	+/-0.010	.386	*		✓	
0.250	+/-0.010	.252	*		✓	
44.57	+/-0.030	44.57	*		✓	
11.70	+/-0.030	11.70	*		T	
3.370	+/-0.030	3.370	*		✓	
13.76	+/-0.030	13.76	*		T	
4.300	+/-0.010	4.300	*		✓	
10.11	+/-0.030	10.11	*		T	
12.90	+/-0.030	12.90	*		T	
16.61	+/-0.030	16.61	*		T	
15.80	+/-0.030	15.80	*		T	
3.950	+/-0.010	3.950	*		✓	
0.42	+/-0.030	.419	*		✓	
0.41	+/-0.030	.402	*		✓	
0.85	+/-0.030	.846	*		✓	
19.64	+/-0.030	19.64	*		T	
0.54	+/-0.030	.538	*		✓	
1.400	+/-0.010	1.400	*		✓	
2.63	+/-0.030	2.627	*		✓	
2.93	+/-0.030	2.92	*		✓	
1.49	+/-0.030	1.487	*		✓	
5.98	+/-0.030	5.983	*		✓	
0.54	+/-0.030	.539	*		✓	
2.20	+/-0.030	2.196	*		✓	
2.75	+/-0.030	2.749	*		✓	
2.48	+/-0.030	2.474	*		✓	

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 39929
<b>Description:</b> Tunnel Bottom Panel		<b>Part Number:</b> D3649-1
<b>Inspection Dwg:</b> D3649	<b>Rev:</b> B	<b>Page 2 of 2</b>

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.16	+/-0.030	1.163	*		✓	
3.38	+/-0.030	3.382	*		✓	
2.00	+/-0.030	2.001	*		✓	
0.90	+/-0.030	.907	*		✓	
16.64	+/-0.030	16.64	*		T	
0.48	+/-0.030	.477	*		✓	
13.80	+/-0.030	13.80	*		T	
0.46	+/-0.030	.46	*		✓	
11.76	+/-0.030	11.73	*		T	
1.23	+/-0.030	1.22	*		✓	
0.88	+/-0.030	.88	*		✓	
18.46	+/-0.030	18.46	*		T	
5.23	+/-0.030	5.235	*		✓	
1.932	+/-0.010	1.928	*		✓	
1.943	+/-0.010	1.938	*		✓	
5.02	+/-0.030	5.020	*		✓	
1.820	+/-0.010	1.820	*		✓	
0.70	+/-0.030	.707	*		✓	
2.100	+/-0.010	2.096	*		✓	
2.33	+/-0.030	2.333	*		✓	
0.94	+/-0.030	.94	*		✓	
3.30	+/-0.030	3.294	*		✓	
1.900	+/-0.010	1.897	*		✓	
0.61	+/-0.030	.61			✓	

<b>Measured by:</b> RB	<b>Audited by:</b> [Signature]	<b>Prototype Approval:</b> N/A
<b>Date:</b> 8-6-27	<b>Date:</b> 08/07/01	<b>Date:</b> N/A

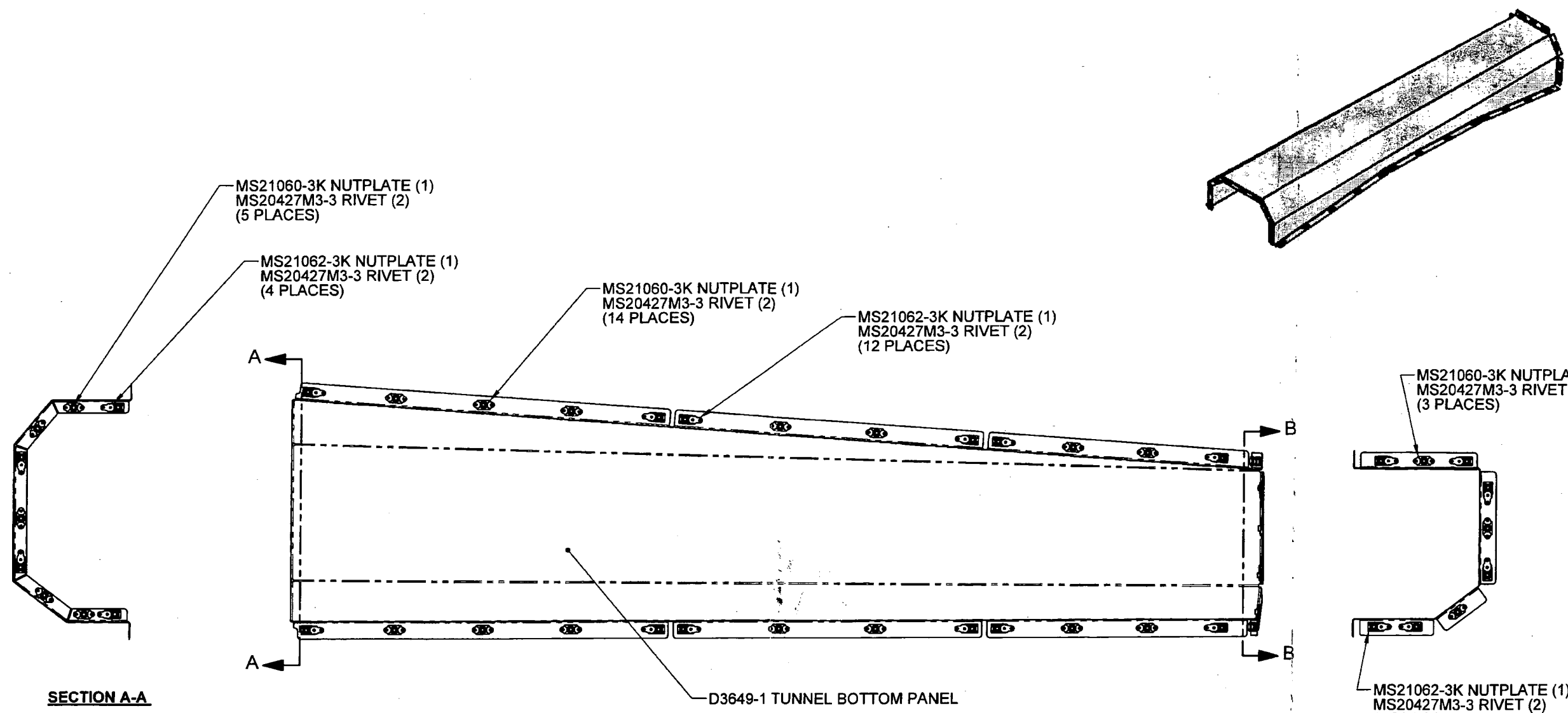
Rev	Date	Change	Revised by	Approved
A	08.04.17	New Issue	KJ/DD [Signature]	[Signature]



8 7 6 5 4 3 2 1

D  
C  
B  
A

D  
C  
B  
A



SECTION A-A

SECTION B-B

**D3649-041 BOTTOM PANEL ASSEMBLY**

**PART LIST**

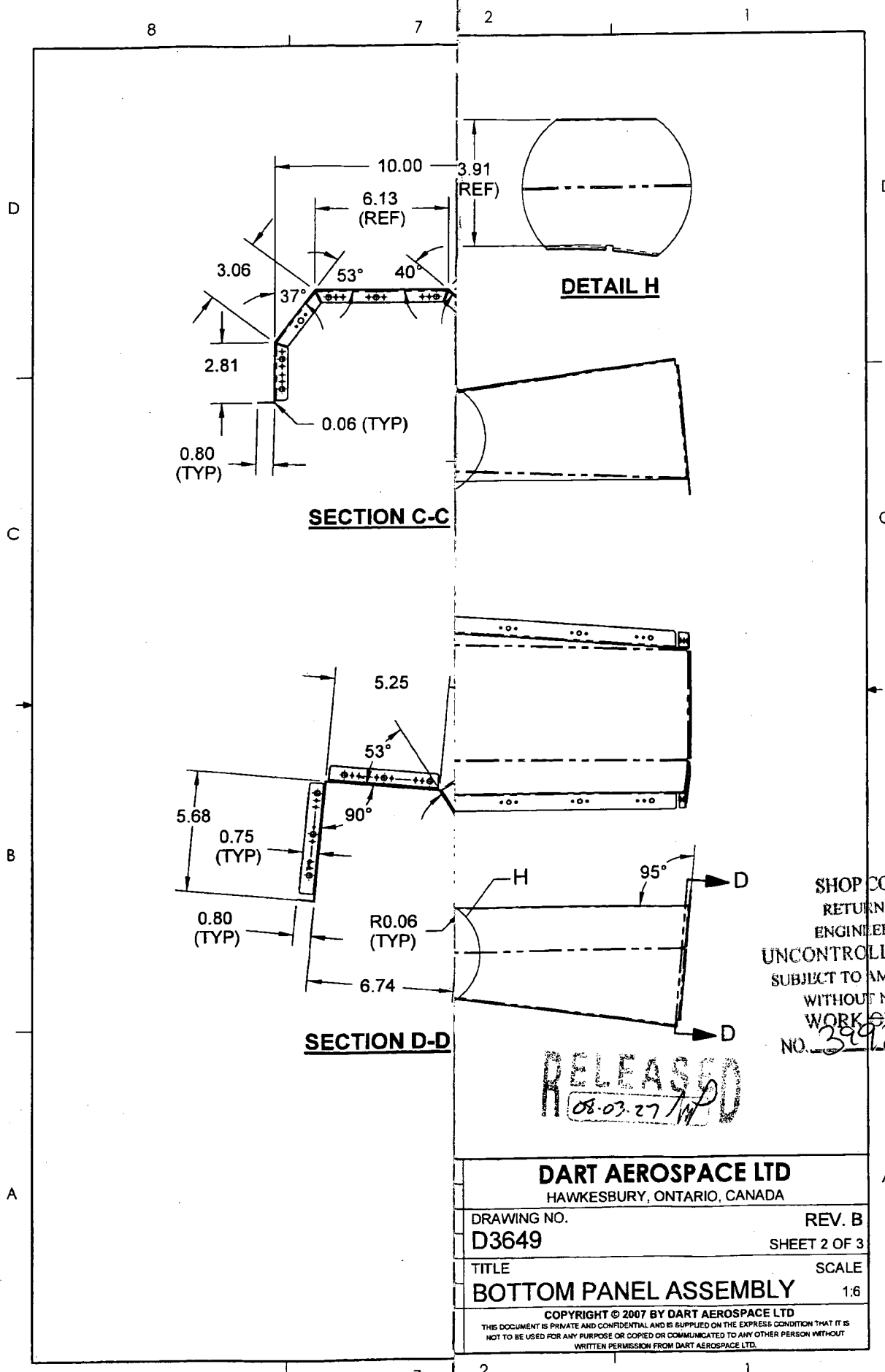
QTY -041	PART NUMBER	DESCRIPTION
X	D3649-041	TUNNEL BOTTOM PANEL ASSY.
1	D3649-1	TUNNEL BOTTOM PANEL
88	MS20427M3-3	RIVET
22	MS21060-3K	NUTPLATE
22	MS21062-3K	NUTPLATE

B	PAGE 3: MS20427M3 WAS MS20427M-3	RF	08.01.07
A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	IE	DRAWING NO.	REV. B
MFG. APPR.		D3649	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		BOTTOM PANEL ASSEMBLY	1:5
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NO. 39929

8 7 6 5 4 3 2 1

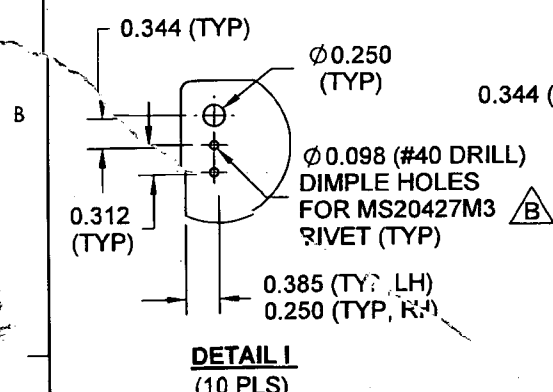
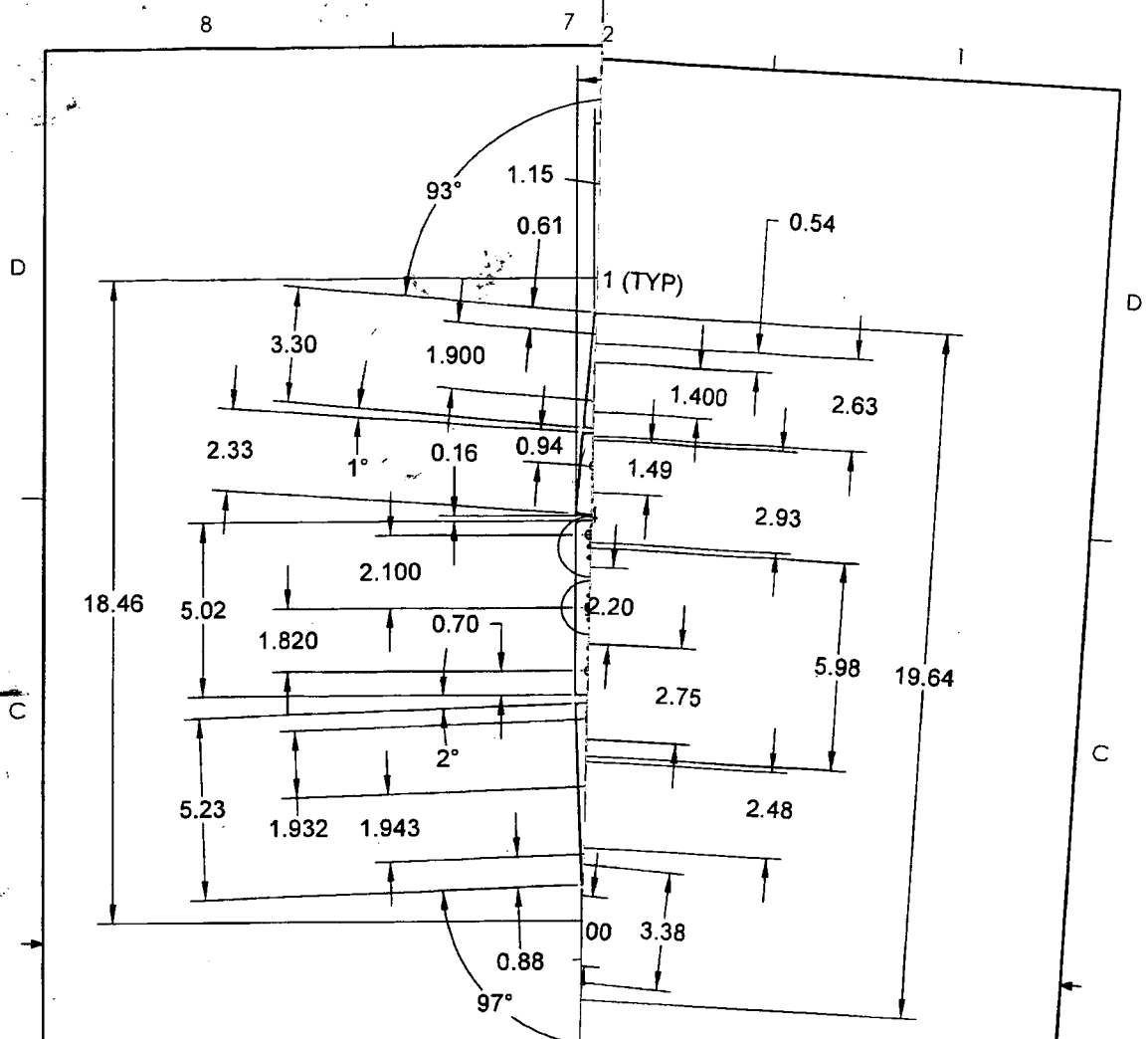


**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3649** REV. B  
SHEET 2 OF 3

TITLE **BOTTOM PANEL ASSEMBLY** SCALE 1:6

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- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS PER MIL-S-5019 (REF. DART AEROSPACE LTD)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE SPECIFIED
  - 4) UNITS: INCHES UNLESS OTHERWISE SPECIFIED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 4.32 lbs

P 90° R 0.063  
 P 94° R 0.063  
 P 85° R 0.063  
 P 87° R 0.063  
 P 90° R 0.063  
 P 94° R 0.063  
 P 91° R 0.063  
 P 90° R 0.063

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 HAWKESBURY, ONTARIO, CANADA  
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 REV. B  
 SHEET 3 OF 3  
 SCALE 1:5  
**DM PANEL ASSEMBLY**  
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3.52 = 400  
 3.506 = 3.565  
 3.6 = 600  
 3.585 = 500